

## ABSTRACT OF THE DISCLOSURE

An image reading apparatus is adapted for irradiating an image carrier including a labeling substance contained in two-dimensionally distributed spots with a stimulating ray and photoelectrically detecting light released from the labeling substance, thereby producing image data, and the image reading apparatus includes at least one stimulating ray source for emitting a stimulating ray, a lens for shaping the stimulating ray emitted from the at least one stimulating ray source into a line beam, a sensor for photoelectrically detecting light released from the labeling substance, and a controller for performing a stimulation and detection step of irradiating the image carrier including the labeling substance contained in the two-dimensionally distributed spots with the line beam of the stimulating ray to stimulate the labeling substance, stopping irradiation with the line beam of the stimulating ray and causing the sensor to photoelectrically detect light released from the labeling substance after the completion of irradiation with the line beam of the stimulating ray. According to the thus constituted image reading apparatus, it is possible to produce low noise image data rapidly and with a simple operation by irradiating an image carrier including two-dimensionally distributed spots of a labeling substance such as a fluorescent substance, a radioactive labeling substance or the like with a stimulating ray to excite the labeling substance and photoelectrically detecting light released from the labeling substance.